

AMENDMENTS TO THE CLAIMS

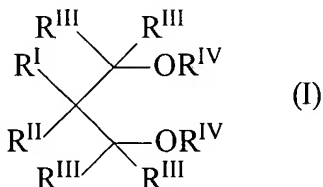
1. (currently amended) Solid Lewis adducts comprising MgCl_2 , a Lewis base (LB) ~~belonging to~~selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C1-C15 hydrocarbon group optionally substituted with ~~heteroatomsheteroatom~~ containing groups, which compounds are in molar ratios to each other defined by the following formula: $\text{MgCl}_2(\text{ROH})_m(\text{LB})_n$ in which m ranges from 0.05 to 6, and n ranges from ~~0.08~~0.07 to 6.
2. (currently amended) The solid Lewis adducts according to claim 1 in which the LB is selected from ethers, esters or ketones.
3. (currently amended) The solid Lewis adducts according to claim 2 in which the LB is selected from esters or ethers.
4. (currently amended) The solid Lewis adducts according to claim 3 in which the ethers are ~~the~~ C2-C20 aliphatic ethers.
5. (currently amended) The solid Lewis adducts according to claim 4 in which the ethers are cyclic ethers having 3-5 carbon atoms.
6. (currently amended) The solid Lewis adducts according to claim 5 in which the cyclic ether is tetrahydrofuran.
7. (currently amended) The solid Lewis adducts according to claim 3 in which the esters are alkyl esters of C1-C10 aliphatic carboxylic acids.
8. (currently amended) The solid Lewis adducts according to claim 1 in which the R groups are C1-C10 saturated hydrocarbon groups.
9. (currently amended) The solid Lewis adducts according to claim 8 in which the R groups are methyl, ethyl and C3- C8 alkyl groups.
10. (currently amended) The solid Lewis adducts according to claim 1 in which the ROH alcohol is ethanol.
11. (currently amended) The solid Lewis adducts according to claim 1 in which m ranges from 0.1 to 4.5 and n ranges from ~~0.07~~0.08 to 3.
12. (currently amended) The solid Lewis adducts according to claim ~~11~~ in which m ranges from 0.5 to 4 and n ranges from 0.1 to 2.5.
13. (currently amended) The solid Lewis ~~adduct~~adducts according to claim 1 ~~containing~~ also further comprising water in a molar ratio defined by the formula

$\text{MgCl}_2(\text{ROH})_m(\text{LB})_n(\text{H}_2\text{O})_p$ in which the index p ranges from 0.01 to 0.6.

14. (currently amended) ~~Process~~A process for preparing ~~the~~a solid Lewis adduct ~~of claim 1~~
comprising MgCl_2 , a Lewis base (LB) selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C1-C15 hydrocarbon group optionally substituted with heteroatom containing groups, which compounds are in molar ratios to each other defined by the following formula: $\text{MgCl}_2(\text{ROH})_m(\text{LB})_n$ in which m ranges from 0.05 to 6, and n ranges from 0.07 to 6; the process comprising (i) contacting MgCl_2 , ROH and LB optionally in the presence of an inert liquid diluent, thereby forming a mixture, (ii) heating the system mixture up to the melting temperature of the mixture and maintaining said conditions so as to obtain a completely molten adduct; and (iii) rapidly cooling the molten adduct, thereby obtaining its solidification.
15. (currently amended) ~~Process~~A process for preparing ~~the~~a solid Lewis adduct ~~of claim 1~~
comprising MgCl_2 , a Lewis base (LB) selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C1-C15 hydrocarbon group optionally substituted with heteroatom containing groups, which compounds are in molar ratios to each other defined by the following formula: $\text{MgCl}_2(\text{ROH})_m(\text{LB})_n$ in which m ranges from 0.05 to 6, and n ranges from 0.07 to 6; the process comprising contacting the LB compound with a preformed solid $\text{MgCl}_2(\text{ROH})_m$ adduct in which R and m have the same meanings given in claim 1.
16. (original) The process according to claim 15 in which the $\text{MgCl}_2(\text{ROH})_m$ adduct derives from a starting adduct in which part of the alcohol has been removed by physical or chemical dealcoholation.
17. (original) The process according to claim 15 in which the LB compound is in vapor phase.
18. (original) The process according to claim 16 in which m is from 0.15 to 1.7.
19. (currently amended) Catalyst components obtained by contacting a solid ~~adducts~~Lewis adduct according to anyone of claims 1-18
comprising MgCl_2 , a Lewis base (LB) selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C1-C15 hydrocarbon group optionally substituted with heteroatom containing groups, which compounds are in molar ratios to each other defined by the following formula: $\text{MgCl}_2(\text{ROH})_m(\text{LB})_n$ in which m ranges from 0.05 to 6, and n ranges from 0.07 to 6,

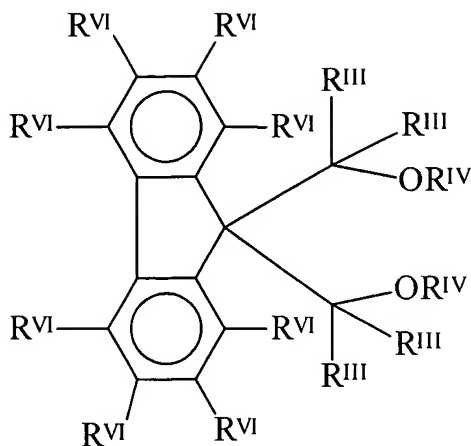
with compounds of transition metals belonging to one of the groups 4 to 6 of the Periodic Table of Elements (new notation).

20. (original) The catalyst components according to claim 19 in which the transition metal compound is selected from titanium compounds of formula $\text{Ti}(\text{OR})_n\text{X}_{y-n}$ in which n is comprised between 0 and y; y is the valence of titanium; X is halogen and R is an alkyl radical having 1-10 carbon atoms or a COR group.
21. (currently amended) The catalyst components according to claim 19 in which the transition metal compound is selected from TiCl_3 , TiCl_4 , $\text{Ti}(\text{OBu})_4$, $\text{Ti}(\text{OBu})\text{Cl}_3$, $\text{Ti}(\text{OBu})_2\text{Cl}_2$, and $\text{Ti}(\text{OBu})_3\text{Cl}$.
22. (currently amended) The catalyst components according to claim 19 further ~~containing~~comprising an electron donor selected from esters, ethers, amines, and ketones.
23. (currently amended) The catalyst ~~component~~components according to claim ~~19~~22 in which the electron donor is selected from 1,3-diethers of formula (I)



where R^{I} and R^{II} are the same or different and are hydrogen or linear or branched $\text{C}_1\text{-C}_{18}$ hydrocarbon groups which can also form ~~one or more cyclic structures~~at least one cyclic structure; R^{III} groups, equal or different from each other, are hydrogen or $\text{C}_1\text{-C}_{18}$ hydrocarbon groups; R^{IV} groups equal or different from each other, have the same meaning of R^{III} except that they cannot be hydrogen; each of R^{I} to R^{IV} groups can contain heteroatoms selected from halogens, N, O, S and Si.

24. (currently amended) The catalyst component according to claim ~~19~~22 in which the electron donor is selected from 1,3-diethers of formula (III)



(III)

where the R^{VI} radicals equal or different are hydrogen[[:]], halogens, preferably Cl and F; C₁-C₂₀ alkyl radicals, linear or branched; C₃-C₂₀ cycloalkyl, C₆-C₂₀ aryl, C₇-C₂₀ alkylaryl and C₇-C₂₀ aralkyl radicals, optionally containing one or more heteroatoms at least one first heteroatom selected from the group consisting of N, O, S, P, Si and halogens, in particular Cl and F, as substitutes for carbon or hydrogen atoms, or both; the radicals radical R^{III} are hydrogen or C₁-C₁₈ hydrocarbon groups and the radical R^{IV} are C₁-C₁₈ hydrocarbon groups; and each of R^{III} and R^{IV} can contain a second heteroatom selected from halogens, N, O, S and Si as defined in claim 23.

25. (currently amended) The catalysts A catalyst system for the polymerization of alpha-olefins CH₂=CHR, wherein R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms, obtained by contacting a catalyst component according to anyone of the claims 19-24 with at least one organoaluminum compound, the catalyst component being obtained by contacting a solid Lewis adduct comprising MgCl₂, a Lewis base (LB) selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C₁-C₁₅ hydrocarbon group optionally substituted with heteroatom containing groups, which compounds are in molar ratios to each other defined by the following formula: MgCl₂(ROH)_m(LB)_n in which m ranges from 0.05 to 6, and n ranges from 0.07 to 6, with compounds of transition metals belonging to one of the groups 4 to 6 of the Periodic Table of Elements (new notation) with one or more organoaluminum compounds.
26. (original) The catalyst system according to claim 25 in which the organoaluminum

compound is an Al-alkyl compound.

27. (currently amended) The catalyst system according to claim 26 further ~~containing~~comprising an external electron donor compound.
28. (currently amended) ~~Process for the~~A process comprising polymerizing polymerization of olefins ~~carried out~~ in the presence of a catalyst ~~according to anyone of claims 25-27~~ obtained by contacting a catalyst component with at least one organoaluminum compound, the catalyst component being obtained by contacting a solid Lewis adduct comprising MgCl_2 a Lewis base (LB) selected from ethers, esters, ketones, silanes or amines, and an alcohol ROH, in which R is a C1-C15 hydrocarbon group optionally substituted with heteroatom containing groups, which compounds are in molar ratios to each other defined by the following formula: $\text{MgCl}_2(\text{ROH})_m(\text{LB})_n$ in which m ranges from 0.05 to 6, and n ranges from 0.07 to 6, with compounds of transition metals belonging to one of the groups 4 to 6 of the Periodic Table of Elements (new notation).
29. (new) The catalyst component of claim 24 where the R^{VI} radicals are selected from Cl and F.
30. (new) The catalyst component of claim 24 wherein the at least one first heteroatom are selected from Cl and F.